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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,272	06/30/2004	Bruce Bennett Doris	FIS920030389US1	4271

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EXAMINER	
TSAI, H JEY	

ART UNIT	PAPER NUMBER
2812	

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/710,272	DORIS ET AL.	
	Examiner	Art Unit	
	H.Jey Tsai	2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/10/06*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *16-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15, 23-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

In view of petition decision mailed on Aug. 28, 2006, the last Final rejection is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 6-15, 23-30 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Hareland et al. 6,909,151, previously applied.

Hareland et al. discloses a method of forming an electronic device, comprising:

forming at least one localized stressor region (stress incorporating layer formed above of beneath the channel region, such as silicon nitride layer 360 or 560 or oxide layer 319 or Cobalt silicide 430, same material as instant invention) within the device, col. 2, lines 33-67, col. 6, line 28-67, figs. 3-4,

forming a second localized stressor region within the device (layer 360 formed above or beneath or cobalt silicide layer 430 on each source/drain or layer 19 beneath the channel region), fig. 3A, 3B, 4, col. 2, lines 33-67, col. 6, line 28-67, figs. 3-5,

first localized stressor region and said second localized stressor region causing a channel region to be stressed, col. 2, lines 33-67, col. 6, line 28-67, col.13, lines 1-56, figs. 3-5,

first localized stress-stressor region and said second localized comprise a same type material of SiN or oxide or cobalt silicide, col. 7, lines 1-25, col. 13, lines 1-55,

the same type material comprises one of a compressive stressor material and a, tensile stressor material, col. 2, line 45-57, col. 6, lines 58-67,col. 7, lines 1-25, col. 13, lines 1-55,

device is a FinFET (Fin Field Effect Transistor), fig. 4-5,

forming fin connector 520 to connect the FinFETs and forming a stressor 560, 430, fig. 5E and col. 10, lines 13-67,

first and second localized stressor regions are formed on a source and drain region 430 of the FinFET, fig. 4,

device comprises a planar FET (Field Effect Transistor), fig. 1, 2A,

comprises a compressive carriers in said region being stressed the same type material and primary charge comprise holes (carriers), col. 6, lines 30-35, col, 7, lines 20-67, col. 13, lines 31-55,col, 7, lines 20-67, col. 13, lines 31-55,

the same type material comprises a tensile material and primary charge carriers in the region being stressed comprise electrons (carriers), col. 6, lines 30-35, col, 7, lines 20-67, col. 13, lines 31-55.

The region being stressed causes carrier mobility in the stressed region into one of increased and decreased, relative to a carrier mobility in a region without the stress, col. 6, lines 30-35, col, 7, lines 20-67, col. 13, lines 31-55,

forming a blocking mask, col. 10, lines 36 col. 12, line 35,

at least one of localized stressor region 360 or 560 or 430 interacts with a stressed region located outside said device, fig. 3A, 3B, 5C,

wherein said at least one localized stressor is used to generate one of a compressive and a tensile stress, col. 6, lines 30-35, col, 7, lines 20-67, col. 13, lines 31-55,

wherein the at least one localized stressor region is located within the device to generate a Stress that enhances a performance of the device, col. 2, lines 33-57, col. 6, lines 30-35, col, 7, lines 20-67, col. 13, lines 31-55,

wherein the enhancement comprises an increase in performance enhancement by changing carrier mobility, col. 2, lines 33-57, col. 6, lines 30-35, col, 7, lines 20-67, col. 13, lines 31-55,

wherein at least one localized stressor region 360 or 560 is located to generate a stressed region in at least one of a direction parallel to a current flow and perpendicular to a current flow, (stressor formed on top only or side only or bottom only),

wherein at least one localized stressor region 360 or 560 or silicide is used to create a symetrically stressed region (formed on top and bottom),

wherein at least one localized stressor region 360 or 560 or silicide is used to create an asymmetrically stressed region (stressor formed on top only or side only or bottom only).

Conclusions

Hareland et al. clearly teach forming at least one localized stressor region (stress incorporating layer formed above of beneath the channel region, such as silicon nitride layer 360 or 560 or oxide layer 319 or Cobalt silicide 430, same material as instant invention) within the device,figs. 3-4, forming a second localized stressor region within the device (layer 360 formed above or beneath or cobalt silicide layer 430 on each

source/drain or layer 19 beneath the channel region), first localized stressor region and said second localized stressor region causing a channel region to be stressed as set forth above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry of a general nature or clerical matters or relating to the status of this application or proceeding should be directed to the customer service whose telephone number is (703) 308-4357.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. Jey Tsai whose telephone number is (571) 272-1684. The examiner can normally be reached on from 7:00 Am to 4:00 Pm., Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael S. Lebentritt can be reached on (571) 272-1873.

The fax phone number for this Group is 571-273-8300.

hjt

H. Jey Tsai
Primary Examiner
Patent Examining Group 2800